CLAIMS

What is claimed is new and desired to be protected by Letters Patent is set forth in the appended claims:

1) A device for introducing liquids or gas into a mass spectrometers vacuum, said system comprising:

   a) a housing encompassing an internal standard reservoir;

   b) a stepper motor;

   c) a guide rod;

   d) a sampler rod; and

   e) a pressure compensating bladder.

2) The device of Claim 1 including a sealing means for mounting said device to a mass spectrometer.

3) The device of Claim 2 wherein said sealing means includes said housing having a fastening element with said fastening element having a plurality of fastening element engaging O-rings.

4) The device of Claim 2 wherein said sealing means includes said housing having a threaded element with said threaded element having a plurality of circumferentially mounted engaging O-rings.

5) The device of Claim 1 wherein said stepper motor is responsive to a control signal.

6) The device of Claim 5 wherein said stepper motor longitudinally moves said guide rod a predetermined distance specified by said control signal.

7) The device of Claim 6 wherein said guide rod has a sampler rod engaging member whereby said sampler rod moves in conjunction with said guide rod.

8) The device of Claim 1 wherein the sampler rod has engineered leaks therein whereby environmental matter will be introduced into the housing.

9) The device of Claim 1 wherein the housing has sealing means circumferentially engaging said sampler rod.

10) The device of Claim 1 wherein the sampler rod while residing within the housing is substantially encompassed by a cavity having conduit communication with a mass spectrometer vacuum system.

11) The device of Claim 1 wherein the internal standard reservoir has a quantity of a known substance having known results that will be used to determine the working condition of the mass spectrometer.

12) The device of Claim 1 wherein the internal reservoir is in communication with the pressure compensating bladder whereby the known sample material will be subjected to the same pressure as the sampler rod material.

13) The device of Claim 1 further comprising a plenum assembly having an attachment ring for mounting said assembly to the environmental sampler.

14) The device of Claim 13 wherein said plenum assembly has an internal chamber having an inlet port and an outlet port whereby sample material can be directed across the sampler rod.

15) The device of Claim 1 further comprising a waste vacuum port assembly.

16) The device of Claim 15 wherein said waste vacuum port has means for mounting said port to the environmental sampler.

17) The device of Claim 16 wherein said waste vacuum port has a spacer element and a rotating cap assembly.

18) The device of claim 1 wherein the sampler rod engages a predetermined known material residing within the internal standard reservoir.

19) The device of Claim 18 wherein the mass spectrometer analysis of the internal standard reservoir sample produces a known quantity that will be used to verify the accuracy of the in situ testing.

20) The device of Claim 1 wherein the sampler rod under the guidance of the stepper motor moves from an engaging position with the sampler material of the internal standard reservoir to an engaging external position with an environmental material to be sampled.